TAHVIEH
AIR CONDITIONING SYSTEMS

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ISO 9001
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IMQ

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ECO FRIENDLY

Truck air conditionING SYSTEM

Tahvieh History and activity

Tahvieh Company was established in 1964 and successfully paved its way in the air conditioning industry by utilizing technology of Air temp & Trane companies. This company later managed to receive manufacturing permit under the license of two U.S. companies of Chrysler and Air temp.
During 80's, Tahvieh started to design and manufacture a new generation of air conditioning system relying on its rich technical knowledge and great capability of its manpower. As one of the largest private companies in designing and manufacturing air conditioning equipment, it has managed to become a pioneer of this industry in Iran.
In 2013, we began the second half-century of our glorious presence in air conditioning industry and in addition to the previous products, Tahvieh initiated manufacturing of new products and by the end of the first half of 2016, we managed to manufacture and supply mini-chillers, various types of split air condition systems (floor standing, wall mounted and ducted), electrical enclosure air condition, precision air condition, ice cream makers and air conditioning systems for automotive and rail industry.
Tahvieh. In 2016 being a member of International Institute of Refrigeration (IIR). Today, TahviehCo., as one of the largest manufacturers of air conditioning systems and as a top brand in Iran, is one of the reliable sources of supplying the strategic and important industries of the country such as oil, gas, petrochemical, refining, power plants, telecommunications, steel making, train & automobiles, healthcare, Development and other industries of the country.

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Features

Today, the car air conditioner is not a luxury device, but as one of the vehicles features, as we drive our automobiles, a great many of us, can enjoy the same comfort levels that we are accustomed to at home and at work.

Structure and function of equipment

COMPRESSOR

Commonly referred to as the heart of the system, the compressor is a belt driven pump that is fastened to the engine. It is responsible for compressing and transferring refrigerant gas.
The A/C system is split into two sides, a high pressure side and a low pressure side; defined as discharge and suction. Since the compressor is basically a pump, it must have an intake side and a discharge side. The intake, or suction side, draws in refrigerant gas from the outlet of the evaporator. In some cases it does this via the accumulator.

Once the refrigerant is drawn into the suction side, it is compressed and sent to the condenser, where it can then transfer the heat that is absorbed from the inside of the vehicle.
The A/C system compressors must be fit to car motor, to avoid excessive load on the engine.

Compressor Specification

Compressor and Clutch	Compressor	Model	T5140
		Displacement volume (cc/rev.)	138
		rotate direction	CW
		Refrigerant	HFC-R134a
		Oil Volume (cc)	15010± (SP-10)
	Clutch	Allowed voltage (V)	DC 24V
		Power consumption (W)	≤45
		Frictional static torque (N.m)	≥34
		Belt	2A Groove

CONDENSER SET

This is the area in which heat dissipation occurs. The condenser, in many cases, will have much the same appearance as the radiator in your car as the two have very similar functions. The condenser is designed to radiate heat. Condensers must have good air flow anytime the system is in operation.

As hot compressed gasses are introduced into the top of the condenser, they are cooled off. As the gas cools, it condenses and exits the bottom of the condenser as a high pressure liquid.

Condenser Specification

Condenser	Capacity (KW)		11
	Condenser Coil	Pattern	Serpentine
		Dimension (WxHxD) mm	458 x 360 x 44
	Motor	Allowed voltage (V)	DC 24V
		rotate direction	C.W
	Fan	Model	Axial type (7-Blades)
		Dimension (mm)	Ø310

EVAPORATOR SET

Located inside the vehicle, the evaporator serves as the heat absorption component. The evaporator provides several functions. Its primary duty is to remove heat from the inside of your vehicle. A secondary benefit is dehumidification. As warmer air travels through the aluminum fins of the cooler evaporator coil by electrical fan, the moisture contained in the air condenses on its surface. Dust and pollen passing through stick to its wet surfaces and drain off to the outside. On humid days you may have seen this as water dripping from the bottom of your vehicle.

Several other components work in conjunction with the evaporator. Temperature and pressure regulating devices must be used to control its temperature. While there are many variations of devices used, their main functions are the same; keeping pressure in the evaporator low and keeping the evaporator from freezing. A frozen evaporator coil will not absorb as much heat.

Evaporator Specification

Condenser	Capacity (KW)		7
	Air Flow (m^3/h)		1184
	Dimension (WxHxD) mm		677 x 299 x 133
	Expansion Valve		LQACV T01 F1028 1.5T 126
	Motor	Allowed voltage (V)	DC 24V
		Current Consumption (A)	6(A) x 2(EA) =12(A)
	Fan	Type	Double Sirocco
		Dimension (mm)	Ø89 x 84.5L (4EA)

RECEIVER/DRYER

The Receiver/driers is a holding vessel that receives refrigerant from the condenser. Its primary function is to make sure only liquid refrigerant reaches the expansion valve. It also contains a desiccant, a moisture absorbing element to help "dry out" the refrigerant.
Receiver-driers are always located in the high-pressure side of the system, usually between the condenser outlet and the expansion valve inlet. It has a pressure switch to turn off the compressor When pressure higher than allowable pressure; Also it has a sight glass to check the gas flow.

- Material : Steel
- Inside Volume : 450 cc
- Desiccant Weight: 39 gr.
- Desiccant type : XH9
- Desiccant Capacity: Min. 6 gr.
- Allowable Pressure: Max. 20 Kpa
- Pressure switch Specification: Lp2.0, Hp 32 Kgf/cm^2
- O-ring Material: HNBR

HOSES

- Hoses Layer Material : EPDM/PA/CSM/PET
- Raw materials Country of origin: Japan
- Pipes and fittings material : Al 6061 or Al 6063
- Pipes and fittings Country of origin: Iran
- O-ring Material : HNBR
- Operation Temperature Range : -40°C to +135°C
- Standard : SEA J2046C QC/T6642000-

COMPRESSOR BRACKET

DIGITAL CONTROL PANEL

- Digital display
- Simple operating
- Beautiful Pattern
- The ability to set the temperature
- Auto Troubleshoot